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IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE  
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In Re the Application of: George E. Seidel, Lisa Herickhoff, John Schenk

For: Sex Specific Insemination of Mammals With Low Number of Sperm  
Cells

Serial Number: (original US) 09/001,394 (new) \_\_\_\_\_  
(original US) 09/015,454  
(PCT) PCT/US98/27909

Filed: (original US) 31 December 1997 (new) \_\_\_\_\_  
(original US) 29 January 1998  
(PCT) 31 December 1998

Assignee:  
\_\_\_\_\_

**DECLARATION FOR PATENT APPLICATION**

This Declaration is made by George E. Seidel, Lisa Herickhoff, John Schenk.

We are citizens of the United States of America and that our residence and mailing addresses are as follows:

1-00 George E. Seidel, 3101 Arrowhead Road, LaPorte, CO 80535 CO  
2-00 Lisa Herickhoff, 5123 E. County Road 52, Fort Collins, CO 80524 CO  
3-a John Schenk, 1906 Constitution, Fort Collins, CO 80526 CO

We believe that we are the original, first, and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention:


- as originally entitled "Improved Sheath Fluids and Collection Systems for Sex-Specific Cytometer Sorting of Sperm" the specification of which was filed as United States Application Number 09/001,394, filed on December 31, 1997 (the "Original US Application"), and also
- "System for Improving Yield of Sexed Embryos in Mammals" which was filed as United States Application Number 09/015,454, filed on January 29, 1998, and also

- as PCT Application Number PCT/US98/27909 filed on 31 December 1998, and designating the United States of America; this PCT Application being filed while the Original US Application was pending.

We hereby state that we have reviewed and understand the contents of the above-identified specifications, including the claims.

We acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56(a). Further, insofar as the subject matter of any claims of this application was not disclosed in the prior United States or PCT International application we acknowledge the duty to disclose information which is known to be material to patentability as defined in Title 37, Code of Federal Regulations § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

6/29/00

  
George E. Seidel

UNITED STATES OF AMERICA )

)ss.

)

SUBSCRIBED AND AFFIRMED OR SWORN to before me in the County of Larimer, State of Colorado, United States of America, by George E. Seidel, this 29<sup>th</sup> day of June, 2000.


WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.

**Notary Public**

My Commission Expires: 4-9-2004

1. The first step is to identify the problem. This involves understanding the current situation and what needs to be changed.

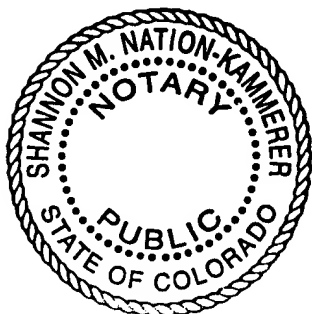
Date: June 30, 2000

  
Lisa Herickhoff

UNITED STATES OF AMERICA )  
STATE OF Colorado )ss.  
COUNTY OF Larimer )

SUBSCRIBED AND AFFIRMED OR SWORN to before me in the County of Larimer, State of Colorado, United States of America, by Lisa Herickhoff, this 30 day of June, 2000.

WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



My Commission Expires 07/15/2003

Shannon N. Natter-Kammerer  
Notary Public  
My Commission Expires: 7-15-2003

Date: 28 Jan 00

John Schenk

UNITED STATES OF AMERICA     )  
STATE OF COLORADO             )ss.  
COUNTY OF LARIMER            )

SUBSCRIBED AND AFFIRMED OR SWORN to before me in the County of Larimer, State of Colorado, United States of America, by John Schenk, this 28 day of June, 2000.

WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



My Commission Expires 07/15/2003

Shannon N. Nativ-Kammerer  
Notary Public  
My Commission Expires: 7-15-2003

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Assignee:

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**VERIFIED STATEMENT ESTABLISHING SMALL ENTITY STATUS  
(UNIVERSITY EMPLOYEE)**

I, George E. Seidel, as an above named inventor of the invention described in the specification filed herewith with title as listed above, hereby declare that all actions involving the creation of the above referenced invention were taken by me as an employee who has acted on behalf of Colorado State University a non-profit organization as defined in 37 C.F.R. 1.9(e) for purposes of paying reduced fees to the Patent and Trademark Office.

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who would not qualify as a small business concern under 37 C.F.R. 1.9(d) or a nonprofit organization under 37 C.F.R. 1.9(e).

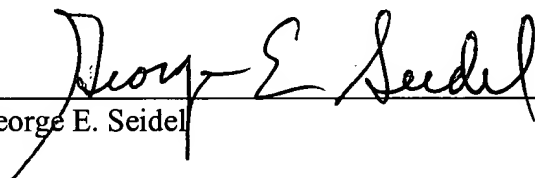
Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

Colorado State University  
c/o Colorado State University Research Foundation  
P. O. Box 483  
Fort Collins, CO 80523

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

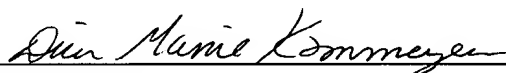
MADE UNDER OATH this 29 day of June, 2000.

  
George E. Seidel

UNITED STATES OF AMERICA    )  
STATE OF COLORADO            )ss.  
COUNTY OF LARIMER            )

SUBSCRIBED AND SWORN to before me in the County of Larimer, State of Colorado, United States of America, by George E. Seidel as Inventor, this 29<sup>th</sup> day of June, 2000.

WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.

  
Notary Public  
My Commission Expires: 4-9-2004

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In Re the Application of: George E. Seidel, Lisa Herickhoff, John Schenk

For: Sex Specific Insemination of Mammals With Low Number of Sperm Cells

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(original US) 29 January 1998  
(PCT) 31 December 1998

Assignee:

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**VERIFIED STATEMENT ESTABLISHING SMALL ENTITY STATUS  
(SMALL BUSINESS CONCERN)**

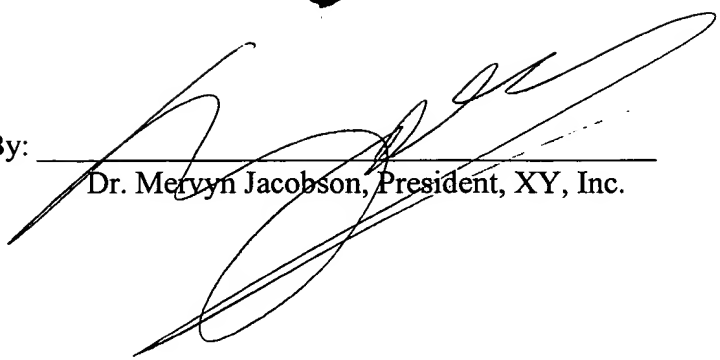
I, Dr. Mervyn Jacobson as president of XY, Inc., pursuant to 37 C.F.R. Section 1.27(c) state that the following facts are true:

1. I am president of XY, Inc. As such I am empowered to act on behalf of the Assignee.
2. As set forth in 13 C.F.R. Section 121.12, XY, Inc. is an entity whose number of employees, including those of its affiliates, does not exceed 500 persons and which has not assigned, granted, conveyed, or licensed, and is under no obligation under contract or law to assign, grant, convey or license, any rights in the subject matter of the enclosed Patent Application. Exclusive rights to the invention have been conveyed to and remain with XY, Inc. XY, Inc appears to qualify as a small business concern as defined in 37 C.F.R. Section 1.9(d).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



MADE this 28 day of June, 2000.

By:   
Dr. Mervyn Jacobson, President, XY, Inc.


UNITED STATES OF AMERICA   )  
STATE OF COLORADO           )ss.  
COUNTY OF LARIMER         )

SUBSCRIBED AND AFFIRMED OR SWORN to before me in the County of Larimer,  
State of Colorado, United States of America, by Dr. Mervyn Jacobson, this 28 day of June, 2000.

WITNESS my hand and official seal pursuant to the authority vested in me as a Notary  
Public by the State of Colorado.



My Commission Expires 07/15/2003

  
Notary Public  
My Commission Expires: 7-15-2003

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(original US) 29 January 1998  
(PCT) 31 December 1998

Assignee:

**VERIFIED STATEMENT ESTABLISHING SMALL ENTITY STATUS**  
**37 CFR 1.9(e)--UNIVERSITY OR OTHER INSTITUTION OF HIGHER LEARNING**

I hereby declare that I am an official empowered to act on behalf of the University identified below:

Colorado State University  
c/o Colorado State University Research Foundation  
601 South Howes Street, Room 410  
Fort Collins, CO 80523

Type of nonprofit organization: University.

I hereby declare that the nonprofit organization identified above is a University or other Institution of Higher Education and therefore qualifies as a nonprofit organization as defined in 37 CFR 1.9(e) for purposes of paying reduced fees to the United States Patent and Trademark Office regarding the invention described in the specification filed herewith with title as listed above.

I hereby declare, to the best of my knowledge, rights under contract or law have been conveyed to and remain with the nonprofit organization except for an exclusive license which has been granted to XY, Inc.

I hereby declare that no rights to the invention are held by any concern which would not qualify as a small business concern under 37 CFR 1.9(d).


Each person, concern, or organization having any rights in the invention is listed below:

- 1) Colorado State University  
c/o Colorado State University Research Foundation  
P. O. Box 483  
Fort Collins, CO 80523
- 2) XY, Inc.  
3801 Rampart Road  
ARBL Building  
Fort Collins, CO 80523

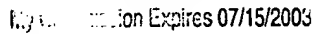
I acknowledge the duty to file, in this application, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Made under OATH this 30<sup>th</sup> day of June, 2000.

By:   
Arundeepr S. Pradhan, Director of Technology Transfer  
for Colorado State University Research Foundation  
agent for Colorado State University

Shannon N. Robison-Kammerer  
Notary Public  
My Commission Expires: 7-15-2003

[illegible]

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(PCT) 31 December 1998

Assignee:

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**POWER OF ATTORNEY**

I, Dr. Mervyn Jacobson, President, on behalf of the Assignee, XY, Inc., hereby appoint Santangelo Law Offices, P.C., whose mailing address is 125 South Howes, Third Floor, Fort Collins, Colorado 80521, including Luke Santangelo, whose registration number before the United States Patent and Trademark Office is 31,997, Craig R. Miles, whose registration number before the United States Patent Office is 45,954, and Chad C. Soliz, whose registration number before the United States Patent Office is P-47,101 as my attorneys/agents to prosecute this application entitled "Sex Specific Insemination of Mammals With Low Number of Sperm Cells" and to transact all business in the Patent Office connected therewith.

Dated this 27 day of June, 2000.

By: \_\_\_\_\_

Dr. Mervyn Jacobson, President, XY, Inc.

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(original US) 29 January 1998  
(PCT) 31 December 1998

Assignee:


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**POWER OF ATTORNEY**

I, Arundeeep S. Pradhan, Director of Technology Transfer, on behalf of the Assignee, Colorado State University Research Foundation as agent for Colorado State University, hereby appoint Santangelo Law Offices, P.C., whose mailing address is 125 South Howes, Third Floor, Fort Collins, Colorado 80521, including Luke Santangelo, whose registration number before the United States Patent and Trademark Office is 31,997, Craig R. Miles, whose registration number before the United States Patent Office is 45,954, and Chad C. Soliz, whose registration number before the United States Patent Office is P-47,101 as my attorneys/agents to prosecute this application entitled "Sex Specific Insemination of Mammals With Low Number of Sperm Cells" and to transact all business in the Patent Office connected therewith.

Dated this 29<sup>th</sup> day of June, 2000.

By:

  
\_\_\_\_\_  
Arundeeep S. Pradhan